

IN THE CLAIMS

The pending claims are reproduced herein for the Examiner's convenience.

1. (Previously Presented) A microelectronic package, comprising:
a heat spreader having a first surface, said heat spreader having at least one recess defined therein by at least one sidewall extending from said heat spreader first surface to a recess bottom surface;
at least one microelectronic die disposed within said at least one recess, said at least one microelectronic die having an active surface, a back surface, and at least one side;
a thermally conductive material adhering said at least one microelectronic die back surface to said recess bottom surface; and
build-up layers disposed on said microelectronic die active surface and said heat spreader first surface.
2. (Canceled).
3. (Previously Presented) The microelectronic package of claim 1, wherein said build-up layers comprise at least one dielectric layer abutting said at least one microelectronic die active surface and said heat spreader first surface and at least one conductive trace disposed on said at least one dielectric layer.
4. (Original) The microelectronic package of claim 3, wherein said at least one dielectric layer is disposed within gaps between said at least one recess sidewall and said at least one microelectronic die side.
5. (Withdrawn) The microelectronic package of claim 1, further including a filler material disposed in gaps between said at least one recess sidewall and said at least one microelectronic dice side.

6. (Original) The microelectronic package of claim 1, wherein said thermally conductive material is selected from the group consisting of resin, epoxy, metal and metal alloys.
7. (Withdrawn) The microelectronic package of claim 1, wherein said at least one recess sidewall is sloped.
8. (Withdrawn) A microelectronic package, comprising:
a heat spreader having a first surface, said heat spreader having at least one recess defined therein by at least one sidewall extending from said heat spreader first surface to a recess bottom surface;
at least one microelectronic die disposed within said at least one recess, said at least one microelectronic die having an active surface, a back surface, and at least one side;
a first plurality of solder bumps disposed upon the microelectronic die back surface; and
a second plurality of solder bumps disposed in the heat spreader at least one recess, wherein the first plurality and the second plurality are each aligned such that the microelectronic die is aligned into a position within the at least one recess.
9. (Withdrawn) The microelectronic package of claim 8, further including:
a wetting layer disposed between the first plurality of solder bumps and the microelectronic die back surface.
10. (Withdrawn) The microelectronic package of claim 8, further including:
a wetting layer disposed between the second plurality of solder bumps and the recess bottom surface.
11. (Original) A microelectronic package, comprising:
a heat spreader having a first surface, said heat spreader having at least one recess defined therein by at least one sidewall extending from said heat spreader first surface to a recess bottom surface;
at least one microelectronic die disposed within said at least one recess, said at least one

microelectronic die having an active surface, a back surface, and at least one side; and

build-up layers disposed on said microelectronic die active surface and said heat spreader first surface, wherein said build-up layers comprise at least one dielectric layer abutting said at least one microelectronic die active surface and said heat spreader first surface and at least one conductive trace disposed on said at least one dielectric layer.

12. (Original) The microelectronic package of claim 11, wherein said at least one dielectric layer is disposed within gaps between said at least one recess sidewall and said at least one microelectronic die side.

13. (Withdrawn) The microelectronic package of claim 11, further including a filler material disposed in gaps between said at least one recess sidewall and said at least one microelectronic die side.

14-22. (Canceled).

23. (Withdrawn) A microelectronic package, comprising:
a heat spreader having a first surface, said heat spreader having at least one recess defined therein by at least one sidewall extending from said heat spreader first surface to a recess bottom surface;

at least one microelectronic die disposed within said at least one recess, said at least one microelectronic die having an active surface, a back surface, and at least one side;

a first plurality of solder bumps disposed upon the microelectronic die back surface;

a second plurality of solder bumps disposed in the heat spreader at least one recess,

wherein the first plurality and the second plurality are each aligned such that the microelectronic die is aligned into a position within the at least one recess; and

build-up layers disposed on said microelectronic die active surface and said heat spreader first surface, wherein said build-up layers comprise at least one dielectric layer abutting said at least one microelectronic die active surface and said heat spreader first surface and at least one conductive trace disposed on said at least one dielectric layer.

24. (Withdrawn) The microelectronic package of claim 23, further including:
a wetting layer disposed between the first plurality of solder bumps and the microelectronic die back surface.
25. (Withdrawn) The microelectronic package of claim 23, further including:
a wetting layer disposed between the second plurality of solder bumps and the recess bottom surface.
26. (Withdrawn) The microelectronic package of claim 23, further including:
a wetting layer disposed between the first plurality of solder bumps and the microelectronic die back surface; and
a wetting layer disposed between the second plurality of solder bumps and the recess bottom surface.
27. (Withdrawn) The microelectronic package of claim 23, wherein said at least one dielectric layer is disposed within gaps between said at least one recess sidewall and said at least one microelectronic die side.
28. (Withdrawn) The microelectronic package of claim 23, further including a filler material disposed in gaps between said at least one recess sidewall and said at least one microelectronic dice side.
29. (Withdrawn) The microelectronic package of claim 23, wherein said at least one recess sidewall is sloped.
30. (Withdrawn) A microelectronic package, comprising:
a heat spreader having a first surface, said heat spreader having at least one recess defined therein by at least one sidewall extending from said heat spreader first surface to a recess bottom surface;

at least one microelectronic die disposed within said at least one recess, said at least one microelectronic die having an active surface, a back surface, and at least one side;

a first plurality of solder bumps disposed upon the microelectronic die back surface;
a second plurality of solder bumps disposed in the heat spreader at least one recess, wherein the first plurality and the second plurality are each aligned such that the microelectronic die is aligned into a position within the at least one recess;

a wetting layer disposed between the first plurality of solder bumps and the microelectronic die back surface; and

a wetting layer disposed between the second plurality of solder bumps and the recess bottom surface.

31. (Withdrawn) The microelectronic package of claim 30, wherein said at least one dielectric layer is disposed within gaps between said at least one recess sidewall and said at least one microelectronic die side.

32. (Withdrawn) The microelectronic package of claim 30, further including a filler material disposed in gaps between said at least one recess sidewall and said at least one microelectronic dice side.

33. (Withdrawn) The microelectronic package of claim 30, wherein said at least one recess sidewall is sloped.